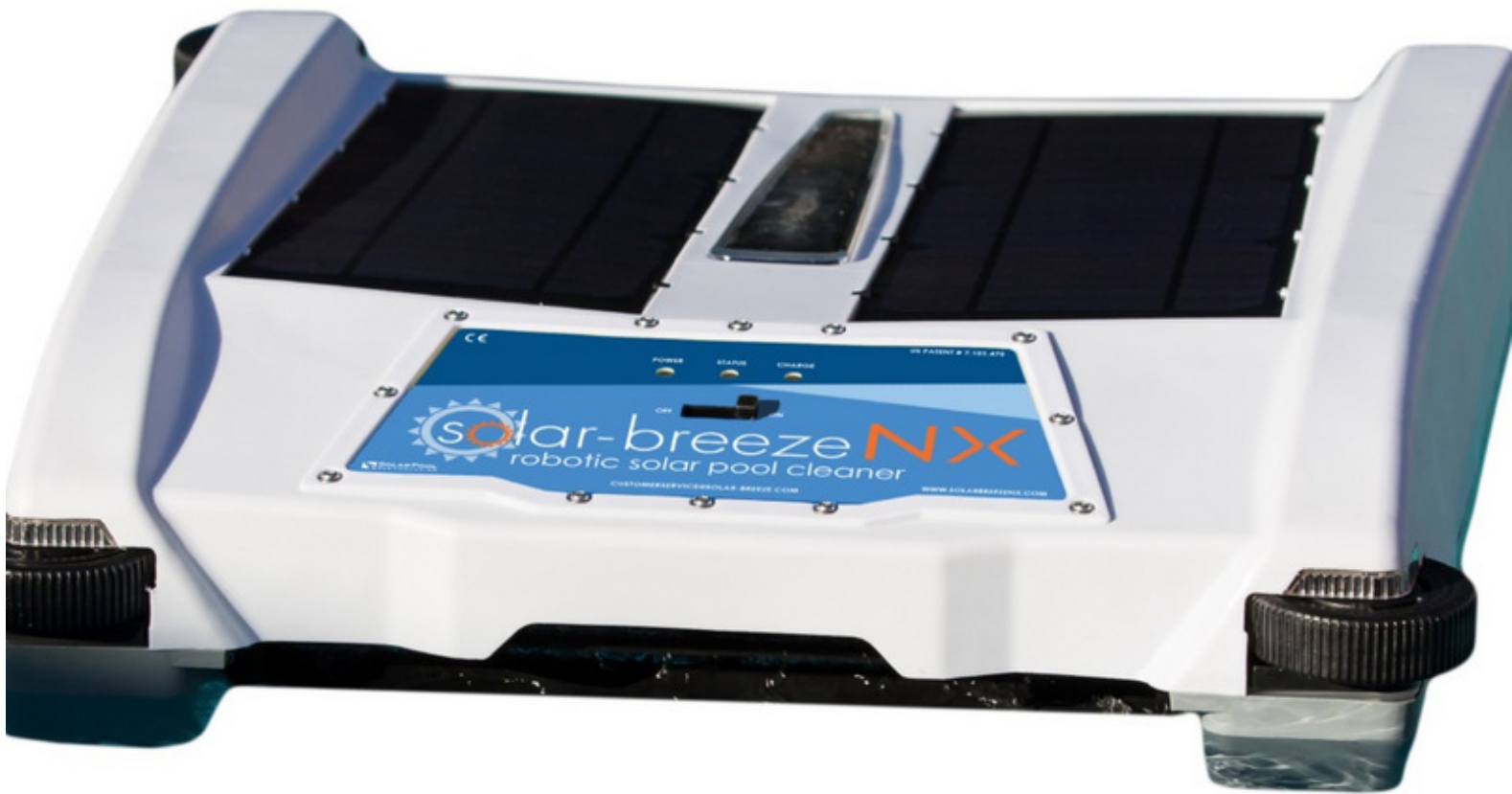




Solar Breeze NX Teardown

See whats inside your Solar Breeze NX before removing all 12 of those pesky screws! You can buy one at <https://solar-breeze.com/>

Written By: Phil



INTRODUCTION

Inside the solar breeze nx robotic pool surface cleaner from <https://solar-breeze.com/>

The solar breeze nx robot is a cool tool for keeping the surface of a pool clean! It might be fun to tweak/customize it a bit more so lets see whats inside...

If anyone knows what to plug into the 6 pin off-white connector at the bottom of the board and what software/protocol to use with it please share.

Goals:

#1 It would be nice to mount a raspberry pi zero in here with wifi to control/interact with the SolarBreeze behaviors remotely. While that would use significantly more battery power, the solar input in southern California is fairly reliable. Perhaps we could schedule the "pi" to only be activate for a short period once per day in case new instructions were needed.

#2 I'd like to set the flashing blue lights to go off after 11pm (or off completely) so that they cause less light pollution here.

#3 I'd like the option to have the unit stop completely at 12pm (midnight), or perhaps some X hours after dark, so that the night time is even more peacefully quiet.

Fun Dreams:

#1 Camera mount and mail a snapshot once per day to see the water/surface quality while away

Notes:

Although the screws are a 6 point star, I was able to use a 5/16" hex/allen wrench without any screws stripping.

There seem to be 12 screws (seemingly more than necessary) in order to tightly but evenly clamp down the semi-flexible polymer upon a rubber seal to prevent water intrusion.

Tech Specs: <https://solar-breeze.com/technical-infor...>

Battery Replacement Kit: <https://solar-breeze.com/faq-page-1/>

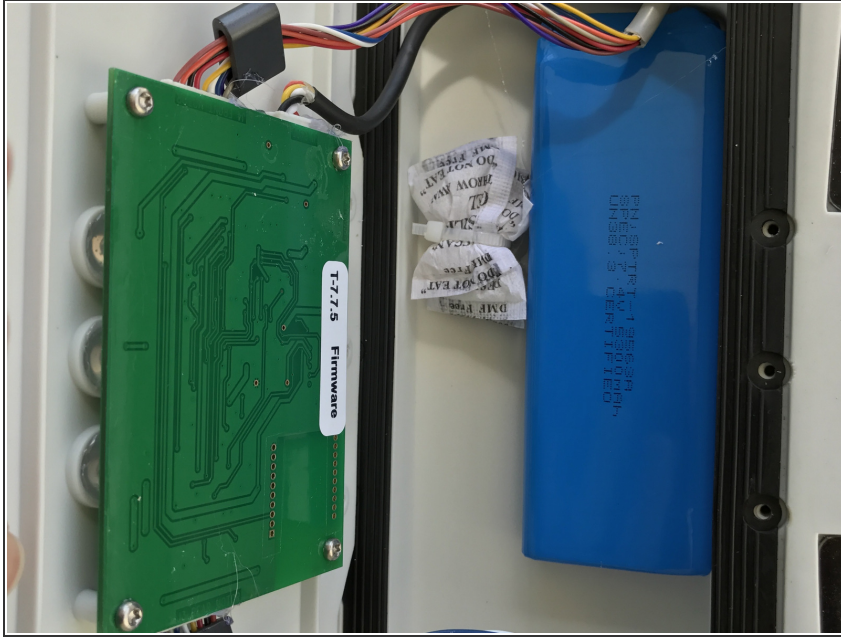
Owners Manual: <https://solar-breeze.com/wp-content/uplo...> ...currently is only an "Operators Manual" as it doesn't explain much about owning/fixing nor even battery replacement.



TOOLS:

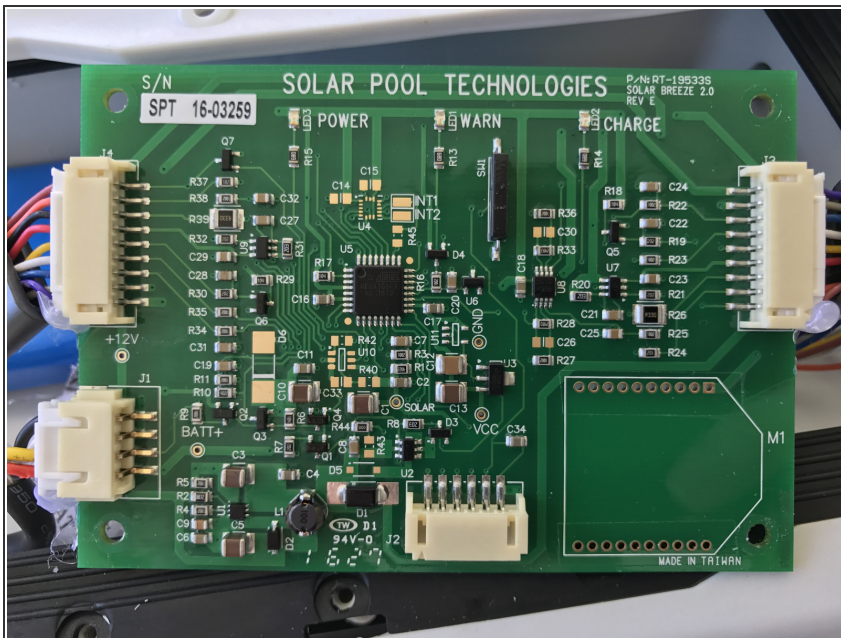
- [5/64" Allen Wrench](#) (1)
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Step 1 — Carefully remove all 12 screws with 5/16" allen wrench



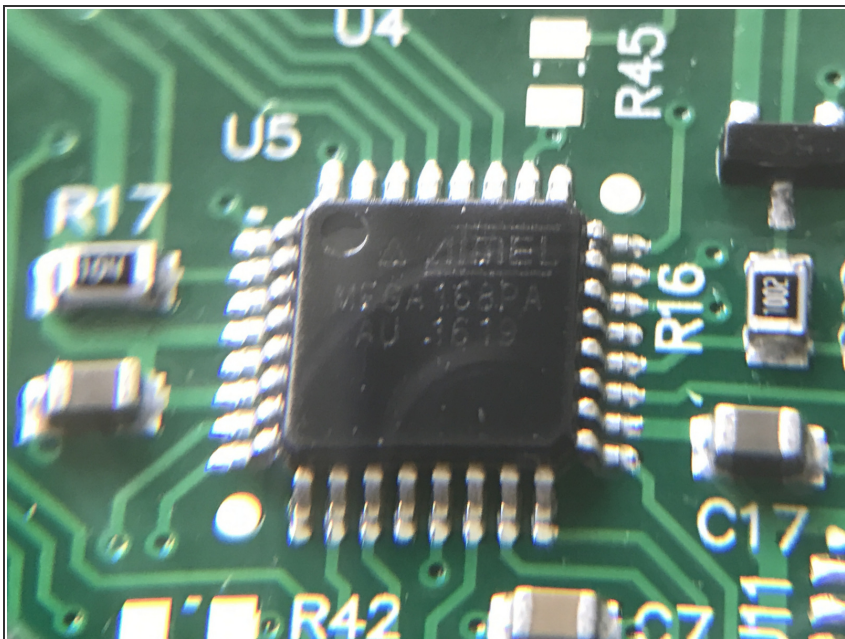
- Battery pack, desiccant and bottom of board showing T-7.7.5 firmware revision number label.

Step 2 — Remove 4 screws under the board to expose the top



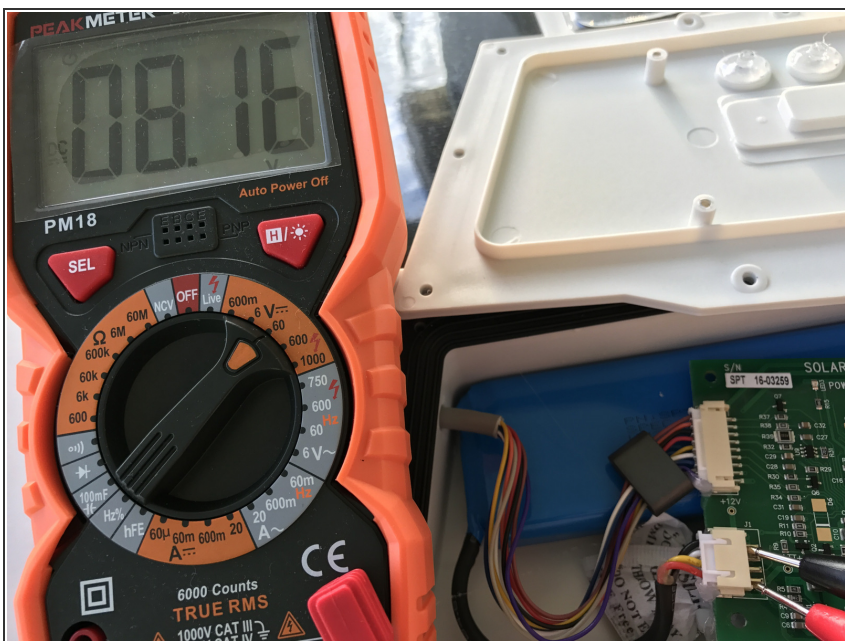
- Insert wisdom here.

Step 3 — Identify the main processor



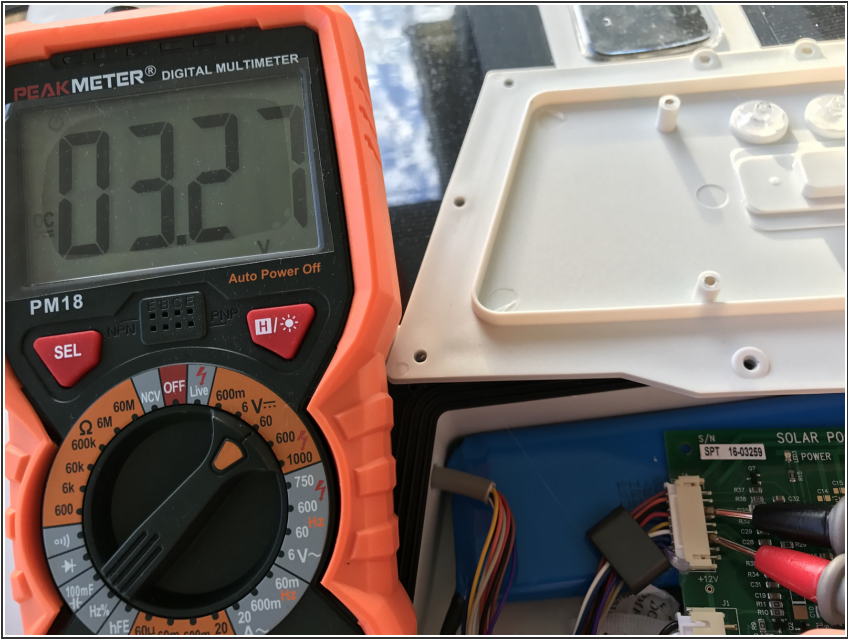
- ATMEL MEGA 168PA AU 1619
- Had to use small magnifying glass to catch this photo with iPhone7plus

Step 4 — Measure voltage input from the solar array



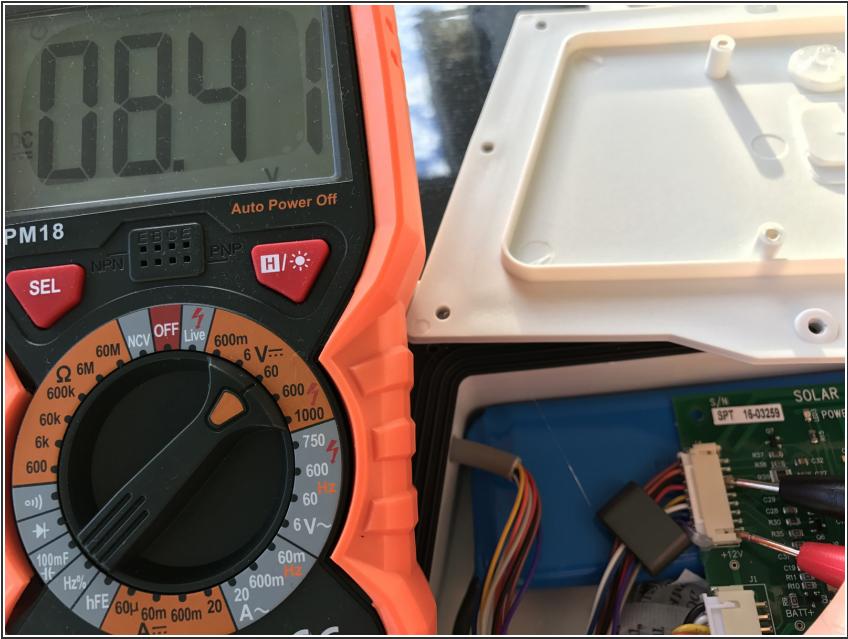
- 8.16 volts (the unit had sat in direct sun to recharge without use for a day prior)

Step 5 — Measure output voltage 3.27v



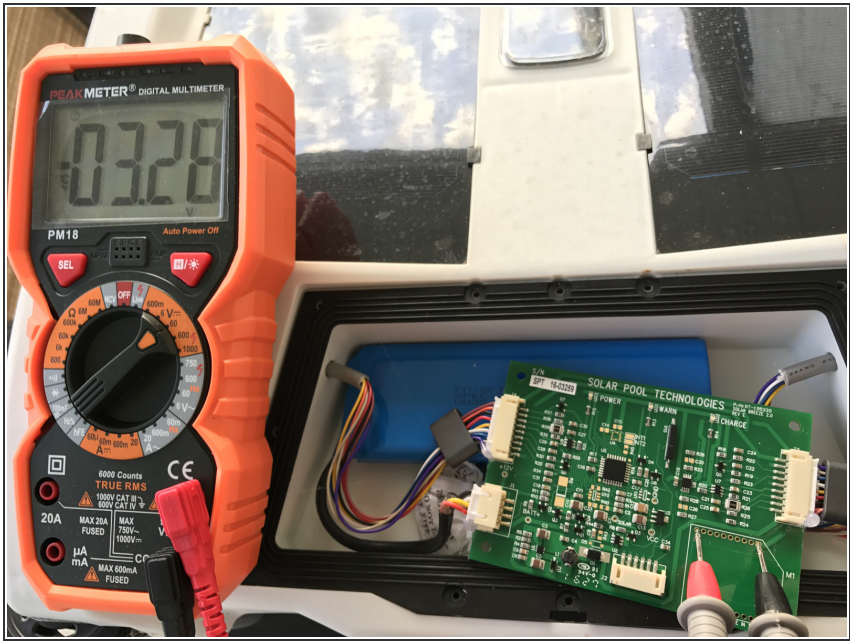
- Insert wisdom here.

Step 6 — Measure output voltage 8.41v



- Insert wisdom here.

Step 7 — Measure voltage on unused part of the circuit board



- Insert wisdom here.

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